



5...4...3...2...1...

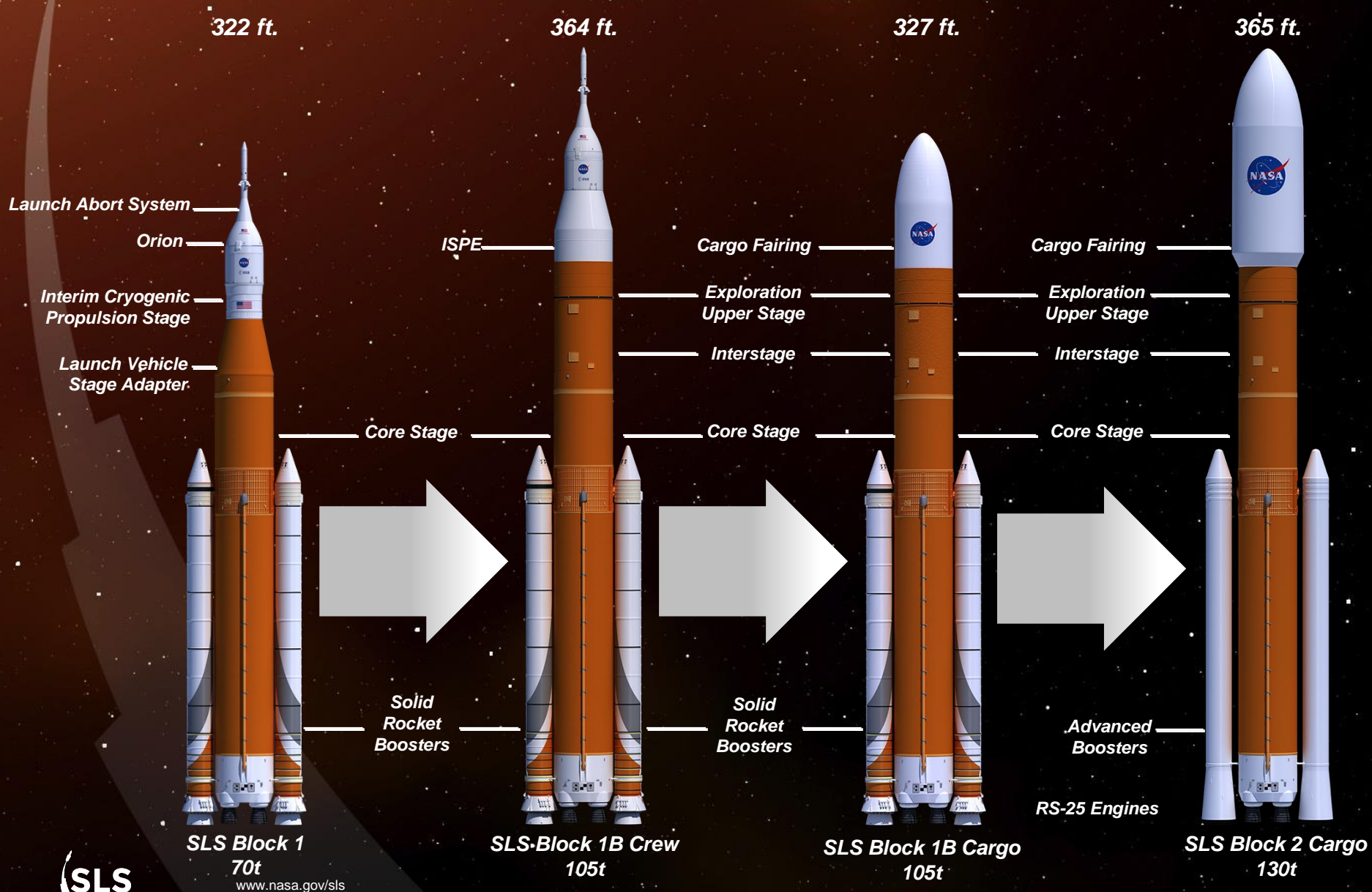
SPACE LAUNCH SYSTEM

A NEW CAPABILITY FOR SPACE EXPLORATION

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Deputy Manager
16 August 2016



Evolution of NASA's Space Launch System

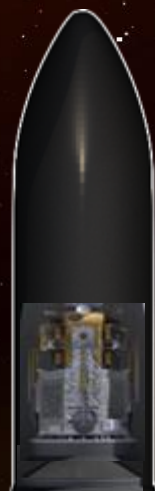




SLS Payload Accommodations

Fairing Availability

- ◆ Universal Stage Adapter offers opportunity for co-manifested payloads with Orion spacecraft or near-term 8.4-meter lower-height accommodations.
- ◆ Universal Stage Adapter accommodations early as second SLS flight; 8.4- and 10-meter fairings available in the mid- and late-2020s, respectively.



5m fairing w/ science payload



Science Missions



Orion with short-duration hab module



8m fairing with large-aperture telescope



10m fairing with notional Mars payload

total mission volume = ~

250m³

400m³

400m³

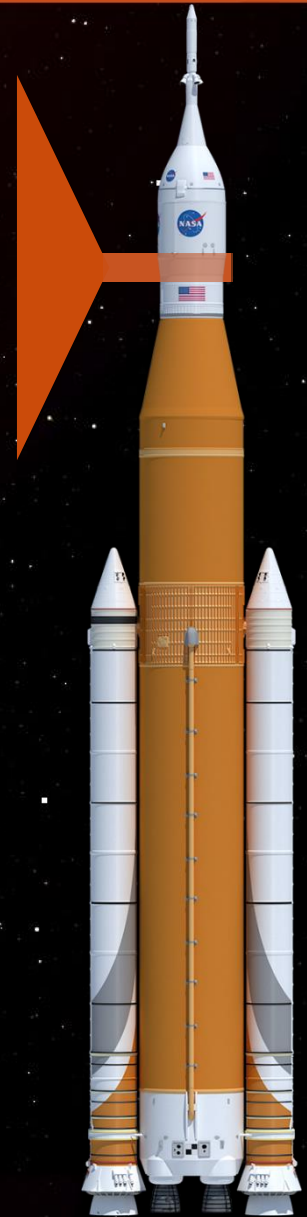
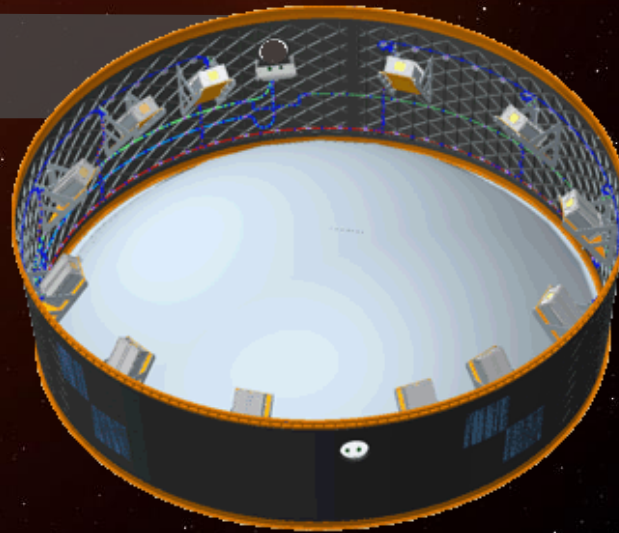
1,200m³

1,800m³

Secondary Payload Capability

Accommodations

- SLS for Exploration Mission-1 will include thirteen 6U payload locations
- 6U volume/mass is the current standard (14 kg payload mass)

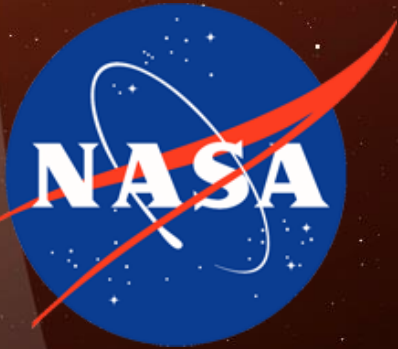


Future Capability

- Options for larger secondary payloads on evolved configurations of SLS are currently being evaluated.



A History of Cooperation

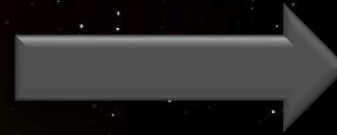


Common Interest

**Advanced Upper
Stage Engine
Technologies**

**Booster/
Engine
Development**

**Advanced
Manufacturing**



Opportunities

**Affordable Upper
Stage Engine
Program Studies**

**American
Kerosene Engine
Studies**

**Selective Laser
Melting Materials
Characterization**

THE ADVENTURE BEGINS NOW.



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